

POULTRY MANURE DRY STACK STRUCTURE

DESIGN WORKSHEET (THREE WALLS)

Vol = Volume of litter stored (Form AL-ENG-25E, Item "O."): _____ cf

W_b = Width of building: _____ ft. (Use actual inside working dimension; i.e., 39 ft.)

H_m = Max height of pile in middle (Max. 7 ft.): _____ ft.

H_s = Height of pile at side walls (Max for wooden wall = 4 ft.): _____ ft.

H_w = Height of wall (H_s + Freeboard): _____ ft. (Maximum 5 ft.)

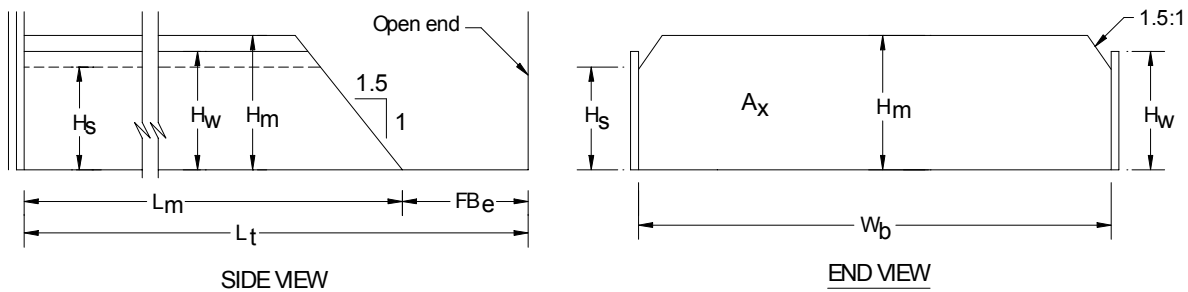
A_x = Cross sectional area of pile (calculate below).

L_m = Length on manure pile (calculate below).

L_i = Length of building (initial calculation) including FB_e .

L_t = Total length; L_i adjusted to account for spacing between side posts.

FB_e = Horizontal freeboard from toe of pile to open end of building. If composter occupies this space, let FB_e = length of composter = _____; otherwise FB_e = 12.



$$A_x = H_m W_b - 1.5 (H_m - H_s)^2 = (\quad \times \quad) - 1.5 (\quad - \quad)^2 = \quad \text{sq. ft.}$$

$$L_m = \text{Vol} / A_x + (0.75 H_m) = (\quad / \quad) + (0.75 \times \quad) = \quad \text{ft.}$$

$$L_i = L_m + FB_e = \quad \text{ft.} \quad \text{Post spacing: } \quad \text{ft. c-c}$$

$$L_t = \quad \text{ft. (NOTE: Round } L_i \text{ up or down to accommodate post spacing.)}$$

Floor area = $W_b \times L_t$ (For W_b use nominal width; i.e., 40 ft.) + Composter Area (See Drawings)

$$\quad \times \quad + \quad = \quad \text{sq.ft.}$$

Floor area x cost/sq. ft. = Estimated total cost of structure

$$\quad \times \$ \quad = \$ \quad$$